CLAIMS

We Claim:

- 1. A liquid composition of the type injected into vascular lumens to solidify and occlude said lumens comprising water and an organic polymer having a gel-sol transition temperature wherein an aqueous solution is formed at temperatures below said transition temperature and wherein a hydrogel is formed at temperatures above said transition temperature.
- 2. The liquid composition of Claim 1, wherein each molecule of said polymer comprises a plurality of blocks, each of which has a cloud point, and at least one hydrophilic block covalently bonded with said plurality of blocks.
- 3. The liquid composition of Claim 2, wherein said plurality of blocks are selected from the group consisting of N-acryloylpiperidine, N-propylmethacrylamide, N-isopropylacrylamide, N-diethylacrylamide, N-isopropylmethacrylamide, N-cyclopropylacrylamide, N-acryloylpyrrolidine, N-ethylacrylamide, N-cyclopropylmethacrylamide, N-ethylacrylamide, propyleneoxide, alkeneoxide, vinylmethylether, and partially-acetylated vinylalcohol.

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- 4. The liquid composition of Claim 2, wherein said hydrophilic block is selected from the group consisting of methyl cellulose, dextran, ethyleneoxide, vinyl alcohol, N-vinyl pyrrolidone, vinylpyridine, acrylamide, methacrylamide, N-methylacrylamide, hydroxyethylmethacrylate, hydroxyethylacrylate, hydroxymethylmethacrylate, hydroxymethylacrylate, hydroxymethylacrylate, methacrylicacid, acrylic acid, vinylsulfonic acid, styrenesulfonic acid, N, N-dimethylaminoethylmethacrylate, N, N-diethylaminoethyl methacrylate, and N, N-dimethylaminopropylacrylamide,.
- 5. The liquid composition of Claim 1, wherein said transition temperature is between 0°C and 40°C.
 - 6. The liquid composition of Claim 1 further comprising biologically active substances.
- 7. The liquid composition of Claim 6, wherein the biologically active substances are selected from the group consisting of cytokines and extracellular matrix materials.
- 8. The liquid composition of Claim 7, wherein the cytokines are selected from the group consisting of tumor growth factor, fibroblast growth factor, vascular endothelial growth factor and platelet-derived growth factor.

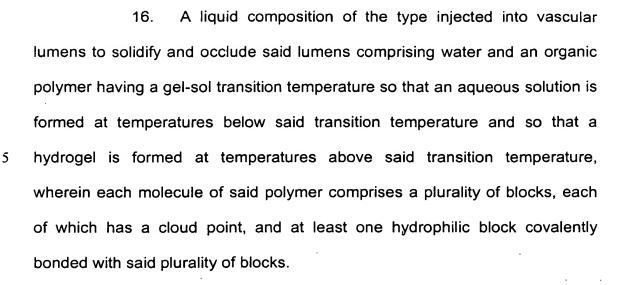
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- 9. The liquid composition of Claim 7 wherein the extracelluar matrix materials are selected from the group consisting of collagen, gelatin, fibronectin, vitronectin, laminin, proteoglycan, and glycosaminoglycan.
- 10. The liquid composition of Claim 6, wherein the biologically active substances further comprise antineoplastic agents.
- 11. The liquid composition of Claim 1 / further comprising radiopaque agents.
- 12. The liquid composition of Claim 11 wherein the radiopaque agents are selected from the group consisting of powdered tungsten, powdered tantalum, powdered gold, powdered platinum, barium sulfate and organoiodine compounds.
 - 13. The liquid composition of Claim 1/2 further comprising substances which alter the gel-sol transition temperature.
- 14. The liquid composition of Claim 1/ further comprising substances which alter viscosity of the aqueous solution.
- 15. A method for occluding a vascular lumen comprising the step of injecting into said lumen an aqueous solution of an organic polymer having a gel-sol transition temperature wherein said aqueous solution forms a hydrogel at temperatures above said transition temperature.



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